stores image data for different volume segments of an image volume and for different cardiac phases of a cardiac cycle. The image data is output from image data buffer 30 to a volume renderer 40 which produces a volume rendering of the scanned volumetric region from a desired viewing perspective. Volume renderings of the full volumetric region are produced for each acquired phase of the cardiac cycle and stored in a Cineloop memory 42. The images stored in the Cineloop memory are generally referred to as a loop, because the usual mode of display is to replay the images in a repeating cycle or loop. The images stored in the Cineloop memory, or an image produced by the volume renderer 40, are applied to a video processor 44. The video processor 44 produces the appropriate drive signals for display of the volumetric images on a display 46. The ultrasound system may also include a scan converter which converts linear or sector scan signals from beamformer 20 to conventional raster scan display signals. The scan converter may be used to produce images in the three dimensional imaging mode known as the "biplane mode," as more fully described in US patent ~~[application serial number 10/231,704, filed August 29, 2002]~~6,709,394.

Amend the paragraph beginning on page 8, line 6 as follows:

The control components of the imaging system of FIGURE ~~7~~2, including transmit event counter 220, comparator 222, OR gate 230, phase counter 232, heartbeat counter 240 and registers 224 and 250, may constitute part of system controller 32 (FIGURE 1). It will be understood that the functions performed by these control components may be performed by a programmed microcomputer within the scope of the invention.

Amend the paragraph beginning on page 9, line 20 as follows:

An example of a three-dimensional image volume 70 for which an image may be acquired in accordance with the present invention is shown in the ultrasound display of FIGURE 4. An image volume 70 may have a conical or pyramidal shape with an apex 52 centered on transducer array 14 (above; not shown). Image data for image volume 70 may be acquired by three-dimensional ultrasound imaging during which a volume segment 80, 82, 84, 86 and 88 is acquired during each heart cycle of an ECG waveform 100. Volume 70 may, for example, be imaged as

a plurality of two-dimensional sector-shaped slices. The diameter of image volume 70 may be defined in terms of the required number of receive lines to achieve a desired resolution. The required number of receive lines to acquire a complete image of volume 70 is given by $(\pi L^2/4)/4$, where L is the diameter of a conical image volume 70 in units of receive lines. Thus, for example, where image volume 70 has a diameter of 120 receive lines, 11,304 receive lines are needed to acquire image data for a conical volume 70. The present invention is particularly suitable for cardiac imaging. To facilitate cardiac imaging, image volume 70 may be divided into three-dimensional volume segments 80-88 for volumetric imaging of the patient's heart.